

## ABSTRACT

A method and apparatus for calibrating an acoustic thermography system 10 and/or enhancing the flaw detection abilities of such a system is provided. The method  
5 allows applying a material (e.g., 103) to a specimen 12 undergoing acoustic thermography inspection. The material is thermally responsive to acoustic energy transmitted to the specimen by the acoustic thermography system. In one aspect thereof, a thermal response of the material applied to the specimen when subjected to acoustic energy is processed to determine whether the level of acoustic energy applied  
10 by the acoustic thermographic system appropriately meets a desired amount of acoustic energy for inspecting the specimen. In another aspect thereof, the thermal response of the specimen in combination with the applied material may be processed to determine whether certain types of flaws (e.g., relatively wide flaws) are actually present in the specimen or to enhance the detectability of other flaws that would only faintly show up  
15 on the infrared images.